

WHAT IS CLAIMED IS:

1. A transfer apparatus for a sheet material article trimmer, the transfer apparatus comprising:
  - a transfer element configured to grip the sheet material article and move the sheet material article in a transfer direction onto a side table of the sheet material article trimmer; and
  - a driver configured to move the transfer element at a same speed as the side table during a first time period when the sheet material article is gripped by the transfer element and the side table is moving in the transfer direction.
2. The transfer apparatus as recited in claim 1 wherein the driver is further configured to move the sheet material article to a predetermined position relative to the side table before moving the transfer element at the same speed as the side table.
3. The transfer apparatus as recited in claim 1 wherein side clamps of the side table grip the sheet material article during at least a portion of the first time period.
4. The transfer apparatus as recited in claim 1 wherein a side trimming operation is performed during at least a portion of the first time period.
5. The transfer apparatus as recited in claim 1 wherein the driver is further configured to move the transfer element at a same speed as a front table of the sheet material article trimmer during at least a portion of a second time period when the transfer element grips the sheet material article and a front clamp of the sheet material article trimmer grips the sheet material article.

6. The transfer apparatus as recited in claim 1 wherein the driver is further configured to move the transfer element at a same speed as a receiving conveyor of the sheet material article trimmer during a third time period so as to move the sheet material article from the side table onto the receiving conveyor.

7. The transfer apparatus as recited in claim 1 wherein the transfer element includes at least one continuous belt.

8. The transfer apparatus as recited in claim 5 wherein the at least one continuous belt includes an upper belt and a lower belt for engaging the sheet material article therebetween.

9. The transfer apparatus as recited in claim 1 wherein the transfer element includes a shuttle mechanism.

10. The transfer apparatus as recited in claim 1 wherein the driver includes an epicycle gear unit, the epicycle gear unit including a constant speed input member driven by a main trimmer drive of the sheet material article trimmer and a variable speed input member configured for varying an output of the epicycle gear unit so as to vary a speed of the transfer element.

11. The transfer apparatus as recited in claim 1 wherein the driver includes a servo motor configured to vary a speed of the transfer element.

12. A method for transferring a sheet material article in a sheet material article trimmer, the method comprising:

gripping the sheet material article and moving the sheet material article in a

transfer direction onto a side table of the sheet material article trimmer in a transfer direction using a transfer element; and

moving the transfer element at a same speed as a side table of the sheet material article trimmer using a driver during a first time period when the sheet material article is gripped by the transfer element and the side table is moving in the transfer direction.

13. The method as recited in claim 12 further comprising moving the sheet material article to a predetermined position relative to the side table using the driver before the moving the transfer element at the same speed as the side table.

14. The method as recited in claim 12 wherein side clamps of the side table grip the sheet material article during at least a portion of the first time period.

15. The method as recited in claim 12 wherein a side trimming operation is performed during at least a portion of the first time period .

16. The method as recited in claim 12 further comprising moving the transfer element at a same speed as a front table of the sheet material article trimmer using the driver during at least a second time period when the transfer element grips the sheet material article and a front clamp of the sheet material article trimmer grips the sheet material article.

17. The method as recited in claim 12 further comprising moving the transfer element at a same speed as a receiving conveyor of the sheet material article trimmer during a third time period using the driver so as to move the sheet material article from the side table onto the receiving conveyor.

18. The method as recited in claim 12 wherein the transfer element includes at least one continuous belt.

19. The method as recited in claim 12 wherein the driver includes an epicycle gear unit, the epicycle gear unit including a constant speed input member driven by a main trimmer drive of the sheet material article trimmer and a variable speed input member configured for varying an output of the epicycle gear unit so as to vary a speed of the transfer element.

20. The method as recited in claim 12 wherein the driver includes a servo motor configured to vary a speed of the transfer element.